

In the claims:

Please amend the claims as follows:

1-33. (canceled).

34. (previously presented). A nucleic acid sequence encoding a chimeric receptor, wherein the chimeric receptor contains two independent polypeptide chains, a first polypeptide chain and a second polypeptide chain, wherein the first polypeptide chain comprises in N- to C-terminus sequence:

- (1) an extracellular ligand association domain of an antibody heavy chain variable region;
- (2) a spacer domain of any polypeptide comprising 20 to 100 amino acid residues;
- (3) a transmembrane domain of any oligopeptide or polypeptide derived from all or part of a human CD4 transmembrane domain; and

an intracellular domain, wherein the intracellular domain is a signaling domain comprised of any naturally occurring polypeptide signaling sequence that is all or part of the human CD4 intracellular signaling domain;

and wherein the second polypeptide chain comprises in N- to C-terminus sequence:

- (4) an extracellular ligand association domain of an antibody light chain variable region;
- (5) a spacer domain of any polypeptide comprising 20 to 100 amino acid residues;
- (6) a transmembrane domain of any oligopeptide or polypeptide derived from all or part of a human CD4 transmembrane domain; and

an intracellular domain, wherein the intracellular domain is a signaling domain comprised of any naturally occurring polypeptide signaling sequence that is all or part of the human T cell receptor zeta chain;

wherein the spacer and/or transmembrane domains of the first and second polypeptide chains are selected to remain unassociated except in the presence of bound ligand.

35. (currently amended). The A nucleic acid sequence according to Claim 34 in association with a carrier.

36. (currently amended). The A nucleic acid sequence according to Claim 35 wherein the carrier is a viral vector, a liposomal vector, a cationic lipid or an antibody.

37. (currently amended). The A nucleic acid sequence according to Claim 35 wherein the carrier is a targeted carrier.

38. (currently amended). The A nucleic acid sequence according to Claim 34 wherein the nucleic acid sequence is on a plasmid.

39-41. (canceled).

42. (new). A host cell comprising the nucleic acid sequence of claim 34.

43. (new). A method for making a host cell comprising the nucleic acid sequence of claim 34, wherein the method comprises introducing the nucleic acid sequence of claim 34 into a host cell *ex vivo* to produce a host cell comprising the nucleic acid sequence of claim 34.